

Wind Powering America

Clean Energy for the 21st Century

Since earliest recorded history, wind power has been used to move ships, grind grain, and pump water. Today, wind power is also being used to provide electricity to homes, schools, businesses, and entire communities. More than half the United States have wind resources that could support the development of utility-scale wind power plants.

We have enough wind in Colorado to generate 288 billion kilowatt-hours (kWh) of electricity annually. That's enough to serve double the entire state's population. Construction on Colorado's first wind farm, Public Service Company's Ponnequin wind farm located near the Colorado-Wyoming border, began in January 1997. The first wind turbine was installed in January 1998 and began generating electricity in April 1998. Today, Ponnequin boasts 29 turbines that generate 20 megawatts (MW) of electricity.

Colorado utilities also purchase wind power for their customers from wind farms in Wyoming. Public Service Company purchases wind power from the Foote Creek Rim Wind Farm near Arlington, Wyoming. In addition, four turbines recently installed at Medicine Bow by the Platte River Valley Authority will serve green-pricing customers and renewable energy programs in Aspen, Fort Collins, Longmont, Loveland, and Estes Park.

What is Green Pricing?

In Colorado, customers can arrange to purchase a certain amount of wind power (actual energy in kWh) per month, for which they commonly pay a small premium to completely or partly offset any higher cost of renewable power sources. The policy of transferring the slightly higher costs for "green power" to customers is called "green pricing." Green power is power produced by renewable or environmentally friendly energy sources, as distinct from power produced by fossil fuel, nuclear, and other types of generators.



How Do I Sign Up?

Residential and commercial customers can join wind power programs across the state by signing up through their local utilities to buy wind energy in 100-kWh blocks on a monthly basis for \$2.50-\$3.00 per month above existing residential rates. Since wind power programs were introduced in Colorado in 1996, more than 16,000 customers have signed up for wind power for their homes and businesses.

You can sign up for wind power through your local utility or online. To sign up for green power and calculate the environmental benefits of your purchases, visit <http://www.cogreenpower.org/>

Colorado utilities currently offering green power include:

- Carbon Power & Light
- Chimney Rock Public Power
- Colorado Springs Utilities
- Delta-Montrose Electric
- Estes Park Power & Light
- Fort Collins Utilities
- Gunnison County Electric
- Holy Cross Energy
- La Plata Electric
- Longmont Power & Communications
- Loveland Water & Power
- Morgan County Rural Electric Mountain Parks Electric
- Mountain Parks Electric
- Northwest Rural Public Power District

Twenty-nine turbines generate 20 megawatts of wind power at the Ponnequin Wind Farm along the Colorado-Wyoming state line. To see the turbines in action watch 9news (KUSA TV). KUSA maintains a solar-powered live action camera on site and purchases enough wind power to provide for the needs of its weather center and maintains live solar-powered cameras on site.

What is the installed wind energy capacity in the United States?

By January 2000, the total U.S. installed wind energy capacity was 2500 MW. (See <http://www.awea.org/faq/instcap.html>) That's enough electricity to meet the needs of 600,000 to 800,000 typical U.S. homes.



Colorado

Additional Resources

American Wind Energy
Association
122 C Street, NW, 4th Floor
Washington, D.C. 20001
phone (202) 383-2500
fax (202) 383-2505
www.awea.org

National Renewable Energy
Laboratory
National Wind Technology Center
1617 Cole Boulevard
Golden, Colorado 80401
(303) 384-6979
www.nrel.gov/wind

U.S. Department of Energy
Denver Regional Support Offices
1617 Cole Boulevard
Golden, Colorado 80401
(303) 275-4826
<http://www.eren.doe.gov/dro/>

U.S. Department of Energy
Wind Energy Program
Forrestal Building
1000 Independence Ave., S.W.
Washington, D.C. 20585
(202) 586-5348
www.eren.doe.gov/wind



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State Summary

Installed—21 MW

Purchased—30 MW from Wyoming

In-State Wind Energy Potential:

170,000 MW capacity after land use and environmental exclusions

288 billion kWh per year electric energy

Current Wind Power Commitments:

20 MW, Ponnequin Wind Farm, Public Service Company of Colorado,
NEG Micon turbines.

25 MW in customer rates, purchased power from Foote Creek Wind Farm

Planned Wind Power Commitments:

Public Service Company

10 MW for green pricing, extension of Ponnequin Wind Farm

25 MW for green pricing, 6 MW built per year starting 2002.

Platte River Power Authority

4.8 MW, Medicine Bow Wind Farm.

Platte River Power Authority

Poudre Valley Rural Electric

Public Service Company

San Isabel Electric

San Luis Valley Rural Electric
Cooperative

San Miguel Power

United Power

Y-W Electric.

Key Contacts

Colorado Springs Utilities

Joanie Callahan

719-668-3809

Fort Collins Utilities

Wind Power Program

Lori Clements-Grote

970-221-6396

<http://www.light-power.org/windpowr.HTM>

Holy Cross Energy

Wind Power Pioneers

Dave Church

970-947-5406

dchurch@holycross.com

www.holycross.com

Land and Water Fund of the Rockies

Rudd Mayer

303-444-1188 ext. 227

rudd@lawfund.org

Public Service Company of Colorado

WindSource Program

800-824-1688

<http://www.psc.com/solutions/>

windsources.asp



New Belgium Brewing Company in Fort Collins, Colorado, is the largest business in Colorado to purchase 100% of its electricity from wind power.

Links

National Wind Technology Center
National Renewable Energy Laboratory
<http://www.nrel.gov/wind/>

Green Power Network
U.S. Dept. of Energy
Energy Efficiency and Renewable
Energy Network
<http://www.eren.doe.gov/greenpower/>

Colorado Wind Power Campaign
<http://www.cogreenpower.org/>

National Wind Coordinating Committee
<http://www.nationalwind.org/>

Wind Energy Resource Atlas
<http://rredc.nrel.gov/wind/pubs/atlas/>

Colorado Renewable Energy Society
<http://www.cres.gen.co.us>

Land and Water Fund of the Rockies
<http://www.lawfund.org>